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18 FEB 1960

MEMORANDUM FOR: Assistant Director for Research and Reports

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THROUGH:
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FROM: Chief, Guided Missile Branch, D/I

SUBJECT: ORR-OSI Activities Concerning Soviet ICBM Deployment

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1. The attached paper (S-538) includes material prepared at the oral request of the Assistant to the DD/I [redacted] as a contribution to a briefing requested by the DCI on the activities of CIA and other intelligence agencies to date relative to Soviet ICBM deployment. The inter-Agency aspects of the ORR-OSI activities, such as participation in various community working groups on deployment, were omitted in accordance with [redacted] instructions. Two additional [redacted] briefs were furnished directly to [redacted] and are not included in the attached material.

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2. Sections 1 through 16 were forwarded in draft on 5 February in order to meet a DD/I deadline, and were discussed with [redacted]. These sections also were coordinated with [redacted]. The "General Comments" section was prepared later but was not forwarded; its content, however, was discussed with [redacted] and is included in the attachment principally as a matter of record.

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Attachment

1 - Same as subject.

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ORR-OSI Activities Concerning Soviet ICBM Deployment

General Comments

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Although current estimates credit the USSR with an initial operational capability (IOC) with ICBMs by 1 January 1960 and a substantially growing capability through 1963-64, U.S. intelligence has not yet identified a single Soviet ICBM site in being or in preparation and does not even have any firm knowledge of the mode of deployment the USSR has adopted. The estimates themselves continue to be controversial, since they are based largely [redacted] fragments of other information subject to a wide variety of interpretations. The principal element of controversy concerns whether the USSR is embarked on an ICBM program which will provide an early and large-scale military superiority, a more limited capability adequate for a high level of deterrence, or a modest capability with the principal emphasis on space programs. This range of possibilities implies a very different strategic relationship between the U.S. and the USSR, as well as a different level of deployment activity within the USSR, at present and in the future.

As is evident from the detailed review which follows, the bulk of the DD/I activities to date relative to ICBM deployment have been focused on stimulating and guiding collection activity

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by every available means. While the total collection effort has been greatly expanded, it has not produced conclusive evidence of any sites. This probably reflects a number of factors, including the limited assets available, our inability to locate or describe specific targets, and, possibly, the limited scope of the actual Soviet program to the present time.

On the analytical side, apart from research in support of collection, the DD/I effort has been and still is concentrated to a large extent on the location and identification of one or more sites from existing information, which consists almost entirely of fragmentary, indirect and in some cases voluminous data. Much of this information is subject to a variety of interpretations, some of it involves serious data-handling problems, in many instances it has no apparent or necessary bearing on missile deployment, and none of it is immediately identifiable with ICBM activity, as opposed to other missile or space activity. As research has progressed, it has encompassed bodies of data increasingly far removed from a direct relationship to ICBM site identification. It is clear that even our best quality material has not been fully exploited. It is not possible, therefore, to conclude that currently available evidence cannot yield positive identification of one or more sites.

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The total DD/I analytical manpower allocated directly or indirectly to the specific problem of ICBM deployment probably represents no more than [] full time research analysts. Moreover, it has only been since mid-1959 that ORR, for example, has had as many [] analysts working exclusively on deployment of the 15 or more Soviet missile systems believed to be operational at the present time. This limitation of resources, the extremely heavy demands for intelligence support of all kinds, and the complexity of the problem have made it impossible to insure systematic and comprehensive exploitation of all of the material already available in the community, even with maximum reliance upon work being done in other agencies and components. On the other hand, it is questionable whether a doubling or tripling of the analytical resources applied to the problem would materially improve the rate of progress in the next year or two.

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In view of the foregoing, it is believed that the best chance of obtaining early, conclusive information on the magnitude of the Soviet ICBM threat lies in accelerated []

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[] programs to collect direct evidence in the USSR, and that the urgency of the problem justifies taking materially greater risks than have so far been judged acceptable.

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1. ICBM Re-examination for First Hyland Panel

In connection with the deliberations of the Hyland Panel, and the DCI's late-1958 comprehensive re-examination of the then-current ICBM estimate ORR prepared a study (Re-examination of the Soviet ICBM Production and Deployment Program Considered in NIE 11-5-58, CIA/RR MP-259, dated 24 October 1958) which assessed the various kinds of activity which should have taken place or have been in process, and the rates at which these should proceed, if the USSR were engaged in an ICBM program of a pace and scale consistent with estimated Soviet capabilities. This study examined both the production and deployment aspects and attempted also to assess the probability of detecting a large-scale Soviet program at an early date, if such were in process. The study concluded (with the concurrence of GMAIC) that a large-scale Soviet program could probably get underway without detection, because in its early build-up stages the total volume of observable ICBM-related activity might not be identifiable against the broad and varied general background of Soviet economic activity. Given current collection assets, a high probability of detection of at least the general magnitude and pace of such a program would occur only when activity began to approach peak rates, that is, some 12 to 18 months after the beginning of serial production and achievement of an initial operational capability (IOC). Collectors were briefed on the results of this study and were alerted to the significance of detecting various kinds of activity in its early stages.

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2. ICBM Collection Guide

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In early 1958 ORR prepared collection guidance material on ICBM deployment which was incorporated in a joint ORR-OSI ICBM guide, [REDACTED] issued in April 1958 (Draft Collection Planning Aid on the Soviet ICBM Program, CIA/RR MP-223). 950 copies of this guide were issued. The deployment portions of the guide discussed the alternative modes of deployment open to the Soviets, i.e., mobile or fixed and described the kinds of information which might be indicative of ICBM deployment activity.

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3. Systematic Survey and Evaluation of Reports of Ballistic Missile Sites

In the middle of 1958 ORR undertook, at the request of [] the systematic analysis and evaluation of the large number of reports of Soviet ballistic missile launching sites that had accumulated over the years. The original intention was to isolate those areas or locations which appeared to warrant concerted [] collection. It was possible to assign only one analyst to this very large task, and its completion has proved to be far more difficult than had been anticipated, despite full use of the estimates and judgments of both the Army and USAF. A report is now in final draft and will shortly be forwarded [] and made available to other groups in the community. The conclusion of this survey is [] reports on this topic, while legion, generally are so cryptic and non-detailed that evaluation is virtually impossible unless there is strong information from other sources which would confirm or deny it independently. Although only a small number of the total reports examined, were related to ICBM deployment, the latter were not, as a class, materially different from others. This argues that fortuitous circumstances or a genuine improvement in the quality of such reporting probably will be required in order for this type of information to materially affect the current status of intelligence on ICBM deployment. Reports [] [] do aid in focusing attention on cited locations or areas,

but to date have not been sufficiently conclusive to stand alone.
Even when complemented by other information the results to date
have not been conclusive.

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4. Polyarniy Ural Study

In late 1958 ORR initiated a comprehensive study of the factors which might affect Soviet deployment of ICBMs in the Polyarniy Ural area. The purpose was two-fold: (a) to provide a detailed compendium of geographic-economic information for use by analysts; and (b) to attempt to reach a more definitive conclusion as to the probability of ICBM deployment in the area, by considering [redacted] all other available information. Although the effort did not yield firm conclusions on the latter, the geographic-economic data is being prepared for publication as a research aid for guided missile intelligence analysts.

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8. Compilation of Communications, Transportation, Construction
and Geodetic Activities in the Northern USSR

In mid-1959 ORR issued a comprehensive [] collateral source-based research aid summarizing, in a text and on a series of common base maps, known information on Soviet communication, transportation, construction, geodetic, and certain other significant activities in the northern half of the USSR. Although the work originally was planned as an informal working aid for internal ORR use in analysis of indirect information possibly related to ICBM deployment, it was reproduced in quantity and made available throughout the community because of the apparent utility to many other components of having this kind of information in easily comparable form. It is planned to revise and up-date the maps during the next few months.

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9. Possible Missile Deployment Sites

In March 1959 OSI prepared special guidance (RDA 8002)

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[redacted] indicating several suspect places in the USSR where there were indications of possible ICBM deployment activity. The requirement contained maps and suggested possible means of collection.

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12. Probable Soviet Deployment Philosophy for the ICBM

For some time now the intelligence community has been attempting to determine Soviet ICBM deployment concepts in order to better analyze existing information and improve guidance to field collectors. To date no firm determination has been made. OSI is currently working on two formal studies on missile deployment concepts for publication during 1960. These will review Soviet and German missile deployment proposals, analyze known Soviet deployment concepts in the light of recent intelligence information and then estimate the most likely Soviet ICBM deployment philosophy. Research and analysis along similar lines is also taking place in

ORR.

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14. Costs and Inputs for Construction of Fixed Sites for
Launching ICBMs in the USSR

ORR has in process a study of the possible involvement of the Soviet construction industry in an assumed, illustrative ICBM deployment program employing hard sites. This study examines the limited evidence currently available which reflects construction activities possibly related to long-range missile deployment. In view of the paucity of direct information, the major portion of the report is focused on the capabilities of the Soviet construction industry to support a large-scale ICBM fixed site program. In addition to analyzing the cost and materials and manpower requirements of such a program, the study examines in detail the manner in which the USSR would probably organize and carry out the program and some of the activities which would have to take place.

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